

=> fil casreact  
FILE 'CASREACT' ENTERED AT 15:16:09 ON 08 AUG 2007  
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Paul Schulwitz

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FILE CONTENT:1840 - 5 Aug 2007 VOL 147 ISS 7

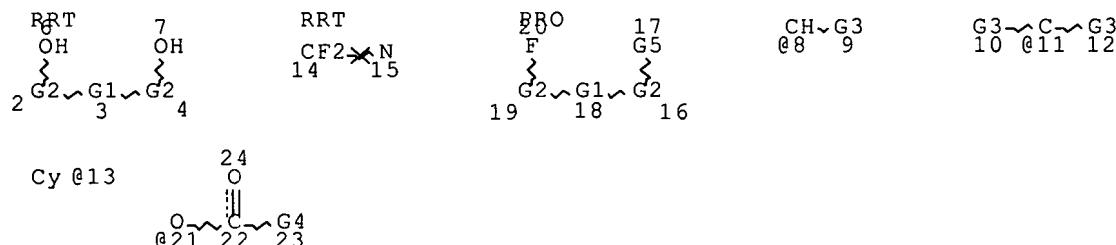
New CAS Information Use Policies, enter HELP USAGETERMS for details.

\*\*\*\*\*  
\*  
\* CASREACT now has more than 12 million reactions \*  
\*  
\*\*\*\*\*

Some CASREACT records are derived from the ZIC/VINITI database (1974-1999) provided by InfoChem, INPI data prior to 1986, and Biotransformations database compiled under the direction of Professor Dr. Klaus Kieslich.

This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d que 136  
L33 STR



REP G1=(0-4) CH2

VAR G2=8/11

VAR G3=AK/13

VAR G4=H/AK/13

VAR G5=OH/21

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 13

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 22

STEREO ATTRIBUTES: NONE

L35      2 SEA FILE=CASREACT SSS FUL L33 (      9 REACTIONS)

L36      2 SEA FILE=CASREACT ABB=ON PLU=ON L35/COM

=> d 136 ibib abs crd tot

L36 ANSWER 1 OF 2 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 145:211276 CASREACT Full-text

TITLE: De novo asymmetric syntheses of C-4-substituted sugars via an iterative dihydroxylation strategy

AUTHOR(S): Ahmed, Md. Moinuddin; O'Doherty, George A.

CORPORATE SOURCE: Department of Chemistry, West Virginia University, Morgantown, WV, 26506, USA

SOURCE: Carbohydrate Research (2006), 341(10), 1505-1521

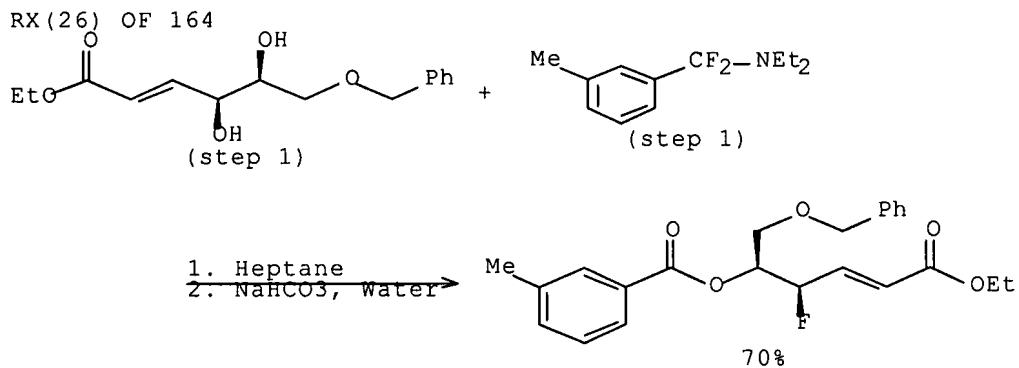
CODEN: CRBRAT; ISSN: 0008-6215

PUBLISHER: Elsevier B.V.

DOCUMENT TYPE: Journal

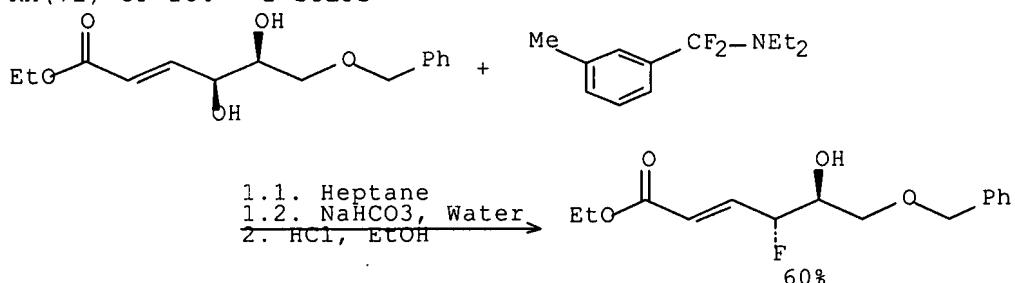
LANGUAGE: English

AB A short and highly efficient route to various C-4 substituted sugar lactones has been developed. The key to the overall transformation is the sequential osmium-catalyzed dihydroxylation reaction of substituted 2,4-dienoates and an allylic substitution at the C-4 position. When the Sharpless AD-mix procedure is used in a matched sense for the second dihydroxylation reaction, it results in an exceedingly diastereoselective and enantioselective synthesis of several C-4-substituted sugars.



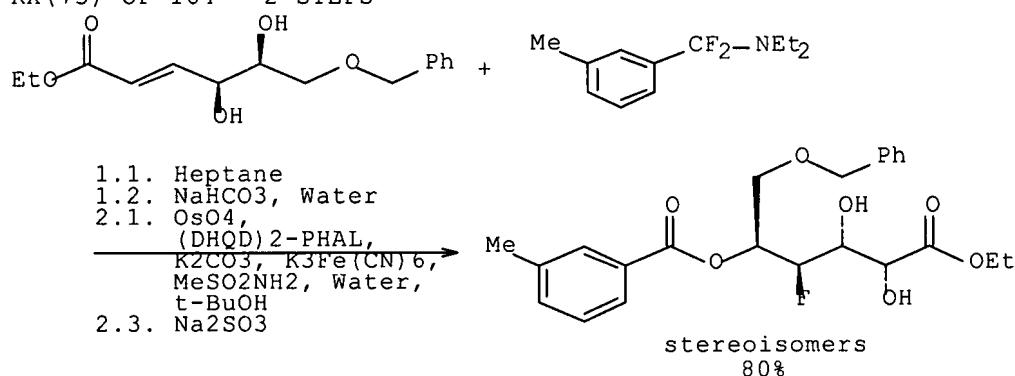
NOTE: stereoselective  
CON: 2 hours, 98 deg C

RX(72) OF 164 - 2 STEPS



NOTE: 1) stereoselective  
CON: STEP(1) 2 hours, 98 deg C  
STEP(2) 24 hours, reflux

RX (73) OF 164 - 2 STEPS



NOTE: 1) stereoselective, 2) stereoselective

CON: STEP(1) 2 hours, 98 deg C  
STEP(2) 15 minutes, room temperature:

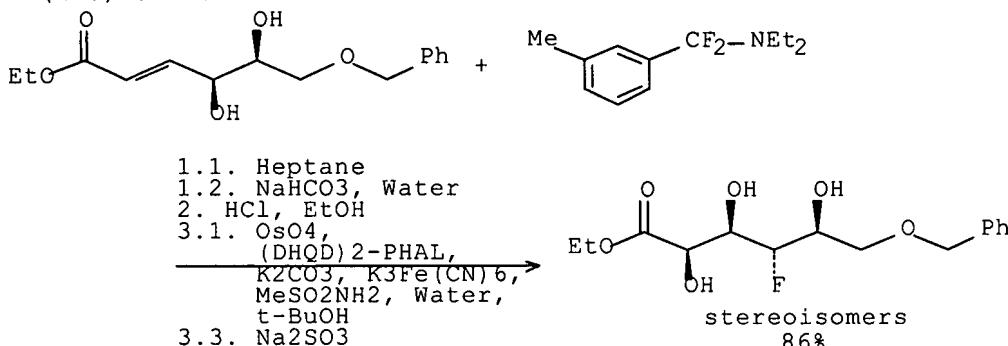
STEP(2.1) 15 minutes, room temperature;  
room temperature  $\rightarrow$  0 deg C

room temperature  $\rightarrow$  0 deg C  
STEP (2.2) overnight, 0 deg C

STEP {2.3} overnight, 0 deg

THE JOURNAL OF CLIMATE

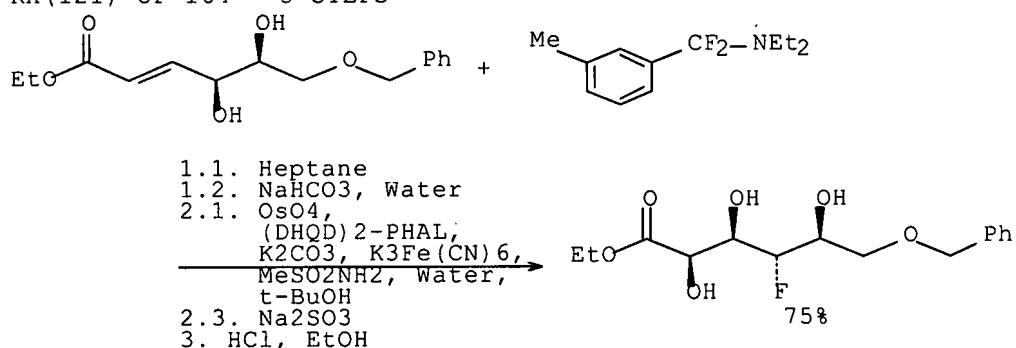
## RX(120) OF 164 - 3 STEPS



NOTE: 1) stereoselective, 3) stereoselective

CON: STEP{1} 2 hours, 98 deg C  
 STEP{2} 24 hours, reflux  
 STEP{3.1} 15 minutes, room temperature;  
 room temperature -> 0 deg C  
 STEP{3.2} overnight, 0 deg C  
 STEP{3.3} room temperature

## RX(121) OF 164 - 3 STEPS



NOTE: 1) stereoselective, 2) stereoselective

CON: STEP{1} 2 hours, 98 deg C  
 STEP{2.1} 15 minutes, room temperature;  
 room temperature -> 0 deg C  
 STEP{2.2} overnight, 0 deg C  
 STEP{2.3} room temperature  
 STEP{3} 24 hours, reflux

REFERENCE COUNT:

26

THERE ARE 26 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L36 ANSWER 2 OF 2 CASREACT COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 143:266411 CASREACT Full-text

TITLE: Selective monofluorination of diols using DFMBA

AUTHOR(S): Yoneda, Atsushi; Fukuhara, Tsuyoshi; Hara, Shoji

CORPORATE SOURCE: Division of Molecular Chemistry, Graduate School of  
Engineering, Hokkaido University, Sapporo, 060-8628,  
JapanSOURCE: Chemical Communications (Cambridge, United Kingdom)  
(2005), (28), 3589-3590 *bad date*

CODEN: CHCOFS; ISSN: 1359-7345

PUBLISHER:

Royal Society of Chemistry

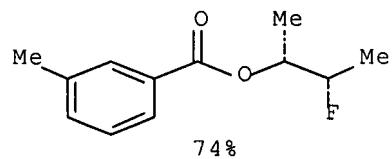
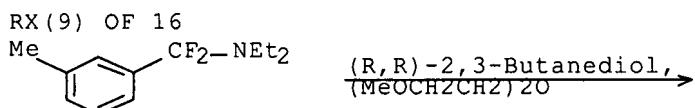
DOCUMENT TYPE:

Journal

LANGUAGE:

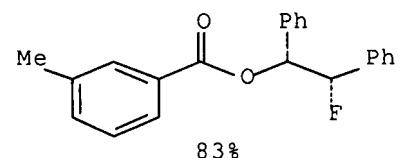
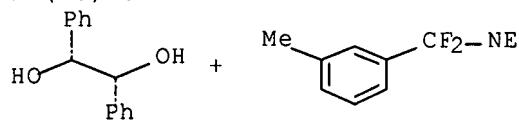
English

AB Selective monofluorination of 1,2- and 1,3-diols was achieved by reaction with DFMBA. The method is applicable for the synthesis of optically-active fluorohydrin derivs.



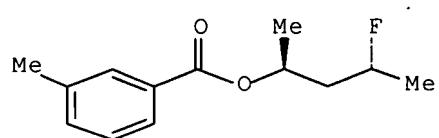
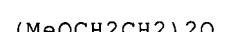
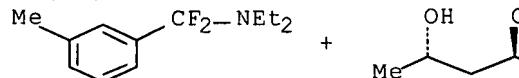
NOTE: selective monofluorination, de >95%, stereoselective  
CON: 1.5 hours, 140 deg C

RX(10) OF 16

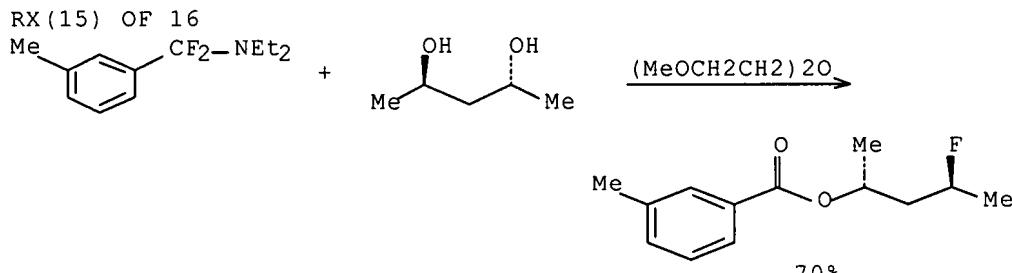


NOTE: selective monofluorination, de >95%, no solvent, stereoselective  
CON: 1 hour, 140 deg C

RX(12) OF 16



NOTE: selective monofluorination, de >95%, alternate prepn. described,  
stereoselective  
CON: 1 hour, 100 deg C



NOTE: selective monofluorination, de >95%, stereoselective  
CON: 1 hour, 100 deg C

REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

```
=> fil casr
'CASR' IS AN AMBIGUOUS FILE OR CLUSTER NAME
CASRNS      - CAS Registry Numbers Cluster
CASREACT    - The Chemical Abstracts Reaction Search Service
ENTER FILE OR CLUSTER NAME (IGNORE):end
```

```
=> fil cap
FILE 'CAPLUS' ENTERED AT 15:16:37 ON 08 AUG 2007
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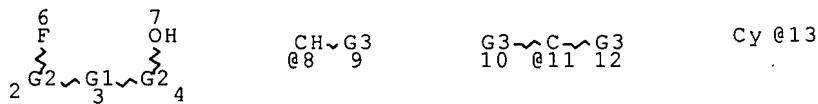
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FILE COVERS 1907 - 8 Aug 2007 VOL 147 ISS 7  
FILE LAST UPDATED: 7 Aug 2007 (20070807/ED)

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They are available for your review at:

<http://www.cas.org/infopolicy.html>

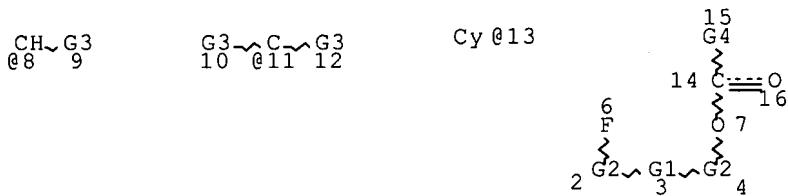
```
=> d que 137
L1          STR
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REP G1=(0-4) CH2  
 VAR G2=8/11  
 VAR G3=AK/13  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 13  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 11

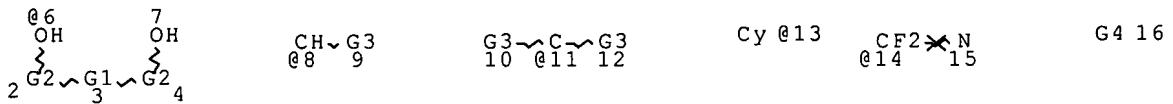
STEREO ATTRIBUTES: NONE  
 L3 SCR 89  
 L5 3212 SEA FILE=REGISTRY SSS FUL L3 AND L1  
 L6 964 SEA FILE=CAPLUS ABB=ON PLU=ON L5(L) PREP+NT/RL  
 L7 STR



REP G1=(0-4) CH2  
 VAR G2=8/11  
 VAR G3=AK/13  
 VAR G4=H/AK/13  
 NODE ATTRIBUTES:  
 DEFAULT MLEVEL IS ATOM  
 GGCAT IS UNS AT 13  
 DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:  
 RING(S) ARE ISOLATED OR EMBEDDED  
 NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE  
 L9 517 SEA FILE=REGISTRY SSS FUL L7  
 L10 128 SEA FILE=CAPLUS ABB=ON PLU=ON L9(L) PREP+NT/RL  
 L13 1046 SEA FILE=CAPLUS ABB=ON PLU=ON L9 OR L6  
 L14 TRANSFER PLU=ON L13 1- RN : 36206 TERMS  
 L15 36201 SEA FILE=REGISTRY ABB=ON PLU=ON L14  
 L16 STR



Page 1-A

6

Page 1-B

REP G1=(0-4) CH2

VAR G2=8/11

VAR G3=AK/13

VAR G4=6/14

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 13

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

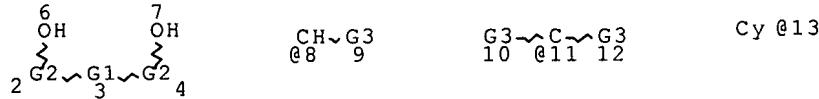
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L19 1006 SEA FILE=REGISTRY SUB=L15 SSS FUL L16

L20 STR



REP G1=(0-4) CH2

VAR G2=8/11

VAR G3=AK/13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 13

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

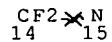
RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L21 980 SEA FILE=REGISTRY SUB=L19 SSS FUL L20

L23 STR



## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

DEFAULT ECLEVEL IS LIMITED

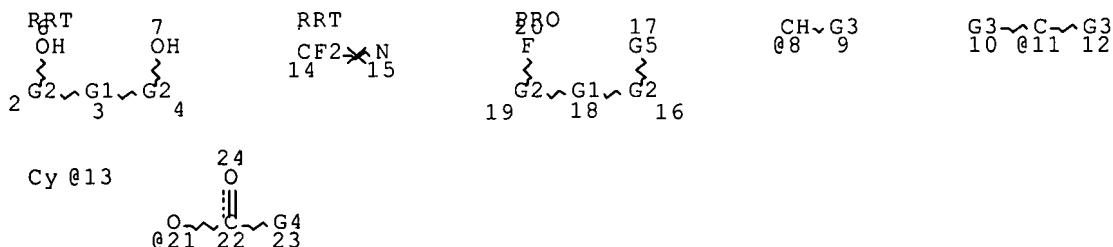
## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 2

## STEREO ATTRIBUTES: NONE

L24	26	SEA FILE=REGISTRY SUB=L19 SSS FUL L23
L25	24662	SEA FILE=CAPLUS ABB=ON PLU=ON L21(L) RACT+NT/RL
L26	21	SEA FILE=CAPLUS ABB=ON PLU=ON L24(L) RACT+NT/RL
L27	5	SEA FILE=CAPLUS ABB=ON PLU=ON L25 AND L26
L28	3	SEA FILE=CAPLUS ABB=ON PLU=ON L27 AND L10
L29	2	SEA FILE=CAPLUS ABB=ON PLU=ON L27 AND L6
L30	3	SEA FILE=CAPLUS ABB=ON PLU=ON L28 OR L29
L33		STR



REP G1=(0-4) CH2

VAR G2=8/11

VAR G3=AK/13

VAR G4=H/AK/13

VAR G5=OH/21

## NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 13

DEFAULT ECLEVEL IS LIMITED

## GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED

NUMBER OF NODES IS 22

## STEREO ATTRIBUTES: NONE

L35	2	SEA FILE=CASREACT SSS FUL L33 ( 9 REACTIONS)
L36	2	SEA FILE=CASREACT ABB=ON PLU=ON L35/COM
L37	1	SEA FILE=CAPLUS ABB=ON PLU=ON L30 NOT L36

=&gt; d 137 ibib abs hitstr

L37 ANSWER 1 OF 1 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2005:1004688 CAPLUS Full-text

DOCUMENT NUMBER: 143:305938

TITLE: Process for producing optically active fluoroalkyl compounds

INVENTOR(S): Hara, Shoji; Fukuhara, Tsuyoshi

PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan

SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005085171	A1	20050915	WO 2005-JP3480	20050302
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1721885	A1	20061115	EP 2005-719795	20050302
R: DE, GB				
CN 1930109	A	20070314	CN 2005-80007051	20050302
PRIORITY APPLN. INFO.:			JP 2004-61202	A 20040304
			WO 2005-JP3480	W 20050302

OTHER SOURCE(S): MARPAT 143:305938  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

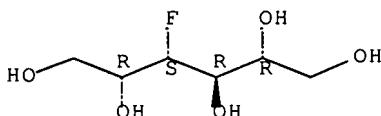
AB A process for the preparation of optically active compds. I [R0 = H, (un)substituted alkyl, etc.; R3-R6 = H, (un)substituted alkyl, etc.; n = 0-3] from fluoroamine II [R0, R1, R2 = H, (un)substituted alkyl, etc.] and chiral diol III [R3-R6, n = same as above] was disclosed. For example, a mixture of (2S,4S)-pentane-2,4-diol (1 mmol) and N,N-diethyl- $\alpha,\alpha$ -difluoro-(3-methyl)benzylamine (1 mmol) in dioxane (1 mL) was irradiated with microwave (2.45 GHz, 500W) for 10 min. The reaction mixture was cooled, followed by treatment with N,N-diethyl- $\alpha,\alpha$ -difluoro-(3-methyl)benzylamine (1 mmol) for 10 min under microwave and aqueous work-up to give (2S,4R)-2-(3-methylbenzoyloxy)-4-fluoropentane in 78% yield and 100% ee.

IT 864720-85-4P  
 RL: SPN (Synthetic preparation); PREP (Preparation)  
 (preparation of optically active fluoroalkanol compds. via hydrolysis of fluoroalkyl ester derivs.)

RN 864720-85-4 CAPLUS

CN D-Altritol, 3-deoxy-3-fluoro- (9CI) (CA INDEX NAME)

Absolute stereochemistry.



IT 2325-10-2 19132-06-0 24347-58-8

42075-32-1 52340-78-0 72345-23-4

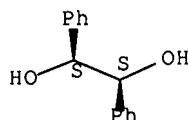
RL: RCT (Reactant); RACT (Reactant or reagent)

(preparation of optically active fluoroalkyl ester compds. via  
fluorination-esterification of diol derivs. using  $\alpha,\alpha$ -  
difluoroalkylamine)

RN 2325-10-2 CAPLUS

CN 1,2-Ethanediol, 1,2-diphenyl-, (1S,2S)- (CA INDEX NAME)

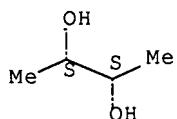
Absolute stereochemistry. Rotation (-).



RN 19132-06-0 CAPLUS

CN 2,3-Butanediol, (2S,3S)- (CA INDEX NAME)

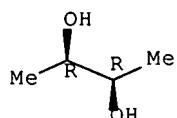
Absolute stereochemistry. Rotation (+).



RN 24347-58-8 CAPLUS

CN 2,3-Butanediol, (2R,3R)- (CA INDEX NAME)

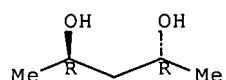
Absolute stereochemistry. Rotation (-).



RN 42075-32-1 CAPLUS

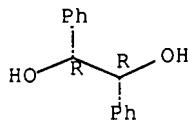
CN 2,4-Pentanediol, (2R,4R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (-).



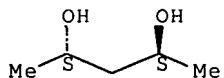
RN 52340-78-0 CAPLUS  
 CN 1,2-Ethanediol, 1,2-diphenyl-, (1R,2R)- (CA INDEX NAME)

Absolute stereochemistry. Rotation (+).

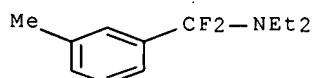


RN 72345-23-4 CAPLUS  
 CN 2,4-Pentanediol, (2S,4S)- (CA INDEX NAME)

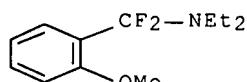
Absolute stereochemistry. Rotation (+).



IT 500131-50-0P 704916-04-1P 863974-08-7P  
 RL: RCT (Reactant); SPN (Synthetic preparation);  
 PREP (Preparation); RACT (Reactant or reagent)  
 (preparation of optically active fluoroalkyl ester compds. via  
 fluorination-esterification of diol derivs. using  $\alpha,\alpha$ -  
 difluoroalkylamine)  
 RN 500131-50-0 CAPLUS  
 CN Benzenemethanamine, N,N-diethyl- $\alpha,\alpha$ -difluoro-3-methyl- (CA  
 INDEX NAME)

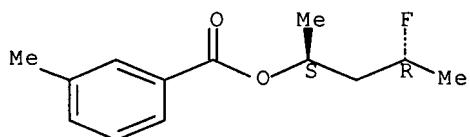


RN 704916-04-1 CAPLUS  
 CN Benzenemethanamine, N,N-diethyl- $\alpha,\alpha$ -difluoro-2-methoxy- (9CI)  
 (CA INDEX NAME)



RN 863974-08-7 CAPLUS  
 CN Benzoic acid, 3-methyl-, (1S,3R)-3-fluoro-1-methylbutyl ester (9CI) (CA  
 INDEX NAME)

Absolute stereochemistry. Rotation (+).



IT 863974-05-4P 863974-06-5P 863974-10-1P

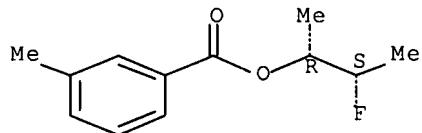
864720-81-0P 864720-83-2P

RL: SPN (Synthetic preparation); PREP (Preparation)  
(preparation of optically active fluoroalkyl ester compds. via  
fluorination-esterification of diol derivs. using  $\alpha,\alpha$ -  
difluoroalkylamine)

RN 863974-05-4 CAPPLUS

CN Benzoic acid, 3-methyl-, (1R,2S)-2-fluoro-1-methylpropyl ester (9CI) (CA INDEX NAME)

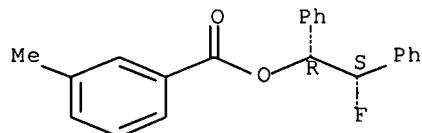
Absolute stereochemistry.



RN 863974-06-5 CAPPLUS

CN Benzoic acid, 3-methyl-, (1R,2S)-2-fluoro-1,2-diphenylethyl ester (9CI)  
(CA INDEX NAME)

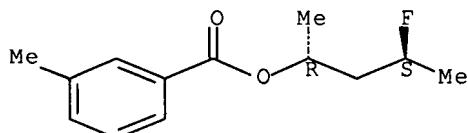
Absolute stereochemistry.



RN 863974-10-1 CAPPLUS

CN Benzoic acid, 3-methyl-, (1R,3S)-3-fluoro-1-methylbutyl ester (9CI) (CA INDEX NAME)

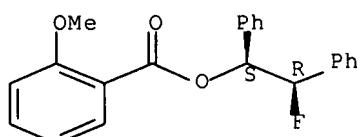
Absolute stereochemistry. Rotation (-).



RN 864720-81-0 CAPLUS

CN Benzoic acid, 2-methoxy-, (1S,2R)-2-fluoro-1,2-diphenylethyl ester (9CI)  
(CA INDEX NAME)

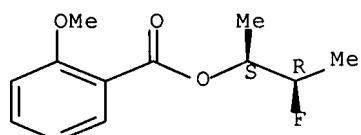
Absolute stereochemistry.



RN 864720-83-2 CAPLUS

CN Benzoic acid, 2-methoxy-, (1S,2R)-2-fluoro-1-methylpropyl ester (9CI) (CA INDEX NAME)

Absolute stereochemistry.



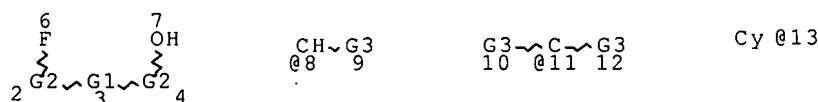
REFERENCE COUNT:

5

THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

=&gt; d que 145

L1 STR



REP G1=(0-4) CH2

VAR G2=8/11

VAR G3=AK/13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 13

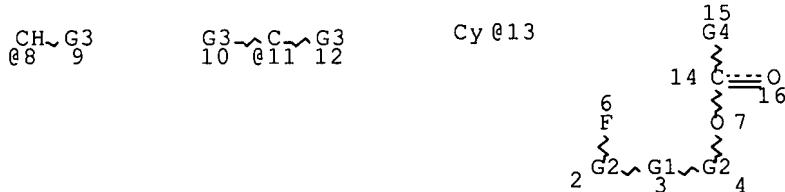
DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 11

STEREO ATTRIBUTES: NONE

L3 SCR 89  
L5 3212 SEA FILE=REGISTRY SSS FUL L3 AND L1  
L7 STR



REP G1=(0-4) CH2

VAR G2=8/11

VAR G3=AK/13

VAR G4=H/AK/13

NODE ATTRIBUTES:

DEFAULT MLEVEL IS ATOM

GGCAT IS UNS AT 13

DEFAULT ECLEVEL IS LIMITED

GRAPH ATTRIBUTES:

RING(S) ARE ISOLATED OR EMBEDDED  
NUMBER OF NODES IS 14

STEREO ATTRIBUTES: NONE

L9 517 SEA FILE=REGISTRY SSS FUL L7  
L38 694 SEA FILE=CAPLUS ABB=ON PLU=ON ("HARA S"/AU OR "HARA S K"/AU  
OR "HARA S M"/AU OR "HARA SHOJI"/AU)  
L39 176 SEA FILE=CAPLUS ABB=ON PLU=ON ("FUKUHARA T"/AU OR "FUKUHARA  
T K"/AU OR "FUKUHARA T KAY"/AU OR "FUKUHARA TSUYOSHI"/AU OR  
"FUKUHARA TSUYOSKI"/AU)  
L41 87 SEA FILE=CAPLUS ABB=ON PLU=ON (L38 OR L39) AND (OPTIC? OR  
ENANT? OR CHIRAL?)  
L42 11 SEA FILE=CAPLUS ABB=ON PLU=ON L41 AND FLUOR?  
L44 3 SEA FILE=CAPLUS ABB=ON PLU=ON (L38 OR L39) AND (L5 OR L9)  
L45 11 SEA FILE=CAPLUS ABB=ON PLU=ON L42 OR L44

=> d 145 ibib abs tot

L45 ANSWER 1 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 2006:597008 CAPLUS Full-text

DOCUMENT NUMBER: 145:83123

TITLE: Preparation of fluoroamides or  
fluoroamines from amino alcohols

INVENTOR(S): Hara, Shoji; Fukuahara, Tsuyoshi;  
Hidaka, Toshio

PATENT ASSIGNEE(S): Hokkaido University, Japan; Mitsubishi Gas Chemical  
Co., Ltd.

SOURCE: Jpn. Kokai Tokkyo Koho, 17 pp.  
 CODEN: JKXXAF  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2006160709	A	20060622	JP 2004-358344	20041210
PRIORITY APPLN. INFO.:			JP 2004-358344	20041210

OTHER SOURCE(S): MARPAT 145:83123

AB FCR3R4(CR5R6)nNR7COR0 and FCR3R4(CR5R6)nNR7CH2R0 [R0, R3-R7 = H, (un)substituted alkyl, aryl, alkylamino, arylamino; 2 of R3-R7 may be linked to form ring; n = 1, 2], useful as building blocks, are prepared from HOCHR3R4(CR5R6)nNHR7 (R3-R7, n = same as above) using F2CR0NR1R2 (R0 = same as above; R1, R2 = similar group as in R0), followed by optional reduction. Optically active products are obtained from optically active amino alcs. Thus, N,N-diethyl- $\alpha$ , $\alpha$ -difluoro-(3-methyl)benzylamine was added to 2-anilinoethanol and exposed to microwave at 70° for 10 min to give 90% N-(2-fluoroethyl)-N-phenyl-(3-methyl)benzamide.

L45 ANSWER 2 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:1004688 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:305938  
 TITLE: Process for producing optically active fluoroalkyl compounds  
 INVENTOR(S): Hara, Shoji; Fukuhara, Tsuyoshi  
 PATENT ASSIGNEE(S): Mitsubishi Gas Chemical Company, Inc., Japan  
 SOURCE: PCT Int. Appl., 19 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2005085171	A1	20050915	WO 2005-JP3480	20050302
W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SM, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW				
RW: BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ, BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG				
EP 1721885	A1	20061115	EP 2005-719795	20050302
R: DE, GB				
CN 1930109	A	20070314	CN 2005-80007051	20050302
PRIORITY APPLN. INFO.:			JP 2004-61202	A 20040304
			WO 2005-JP3480	W 20050302

OTHER SOURCE(S): MARPAT 143:305938  
 GI

\* STRUCTURE DIAGRAM TOO LARGE FOR DISPLAY - AVAILABLE VIA OFFLINE PRINT \*

AB A process for the preparation of optically active compds. I [R0 = H, (un)substituted alkyl, etc.; R3-R6 = H, (un)substituted alkyl, etc.; n = 0-3] from fluoroamine II [R0, R1, R2 = H, (un)substituted alkyl, etc.] and chiral diol III [R3-R6, n = same as above] was disclosed. For example, a mixture of (2S,4S)-pentane-2,4-diol (1 mmol) and N,N-diethyl- $\alpha,\alpha$ -difluoro-(3-methyl)benzylamine (1 mmol) in dioxane (1 mL) was irradiated with microwave (2.45 GHz, 500W) for 10 min. The reaction mixture was cooled, followed by treatment with N,N-diethyl- $\alpha,\alpha$ -difluoro-(3-methyl)benzylamine (1 mmol) for 10 min under microwave and aqueous work-up to give (2S,4R)-2-(3-methylbenzoyloxy)-4-fluoropentane in 78% yield and 100% ee.

REFERENCE COUNT: 5 THERE ARE 5 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 3 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2005:599160 CAPLUS Full-text  
 DOCUMENT NUMBER: 143:266411  
 TITLE: Selective monofluorination of diols using DFMBA  
 AUTHOR(S): Yoneda, Atsushi; Fukuhara, Tsuyoshi;  
 Hara, Shoji  
 CORPORATE SOURCE: Division of Molecular Chemistry, Graduate School of  
 Engineering, Hokkaido University, Sapporo, 060-8628,  
 Japan  
 SOURCE: Chemical Communications (Cambridge, United Kingdom)  
 (2005), (28), 3589-3590  
 CODEN: CHCOFS; ISSN: 1359-7345  
 PUBLISHER: Royal Society of Chemistry  
 DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 143:266411  
 AB Selective monofluorination of 1,2- and 1,3-diols was achieved by reaction with DFMBA. The method is applicable for the synthesis of optically-active fluorohydrin derivs.  
 REFERENCE COUNT: 8 THERE ARE 8 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 4 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 2001:338610 CAPLUS Full-text  
 DOCUMENT NUMBER: 134:340818  
 TITLE: Novel diamine, novel acid dianhydride, and novel polyimide composition formed therefrom  
 INVENTOR(S): Okada, Koji; Hara, Shoji; Nojiri, Hitoshi  
 PATENT ASSIGNEE(S): Kaneka Corp., Japan  
 SOURCE: PCT Int. Appl., 117 pp.  
 CODEN: PIXXD2  
 DOCUMENT TYPE: Patent  
 LANGUAGE: Japanese  
 FAMILY ACC. NUM. COUNT: 1  
 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2001032749	A1	20010510	WO 2000-JP7714	20001101
W: JP, KR, US				
US 7019104	B1	20060328	US 2002-129036	20020430
PRIORITY APPLN. INFO.:			JP 1999-311718	A 19991101
			JP 2000-8390	A 20000117

JP 2000-8391	A 20000117
WO 2000-JP7714	W 20001101

OTHER SOURCE(S): MARPAT 134:340818

AB The diamine and the acid dianhydride are synthesized so as to have a photoreactive and thermally reactive group having one or more double or triple bonds, especially a skeleton of cinnamic acid, chalcone, benzalacetophenone, stilbene, coumarin, pyrone, allyl, propargyl, acetylene, or derivs. of these, and to combine the photoreactivity with the thermal reactivity characteristic of these reactive groups. The polyimide composition is formed from the diamine and the acid dianhydride, having photoreactivity and thermal reactivity. Reaction of m-nitrobenzoyl chloride with 2,2-bis(bromomethyl)-1,3-propanediol, treating the resulting 2,2-bis(bromomethyl)-1,3-bis(m-nitrobenzoate)propane with Cs 4-fluorocinnamate in DMF, and hydrogenation gave 2,2-bis(4-fluorocinnamate Me ester)-1,3-bis(m-aminobenzoate)propane (I). Reaction of I with 2,2-bis(4-hydroxyphenyl)propane-3,3',4,4'-tetracarboxylic acid dianhydride in DMF and stirring the polyamic acid solution with Ac2O,  $\beta$ -picoline, and DMF gave a polyimide with weight mol. weight  $9.2 \times 10^4$ .

REFERENCE COUNT: 15 THERE ARE 15 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 5 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:702246 CAPLUS Full-text

DOCUMENT NUMBER: 132:71116

TITLE: Light emitting devices from organic charge transfer adduct thin films

AUTHOR(S): Kathirgamanathan, P.; Kandappu, V.; Hara, S.; Chandrakumar, K.; Marianesan, S. L.; Selvaranjan, S.; Surendrakumar, S.; Toohey, M. J.

CORPORATE SOURCE: Sch. Electrical, Electronic Information Engineering, Centre for Electronic Materials for Engineering, South Bank University, London, UK

SOURCE: Materials Letters (1999), 40(6), 285-293  
CODEN: MLETDJ; ISSN: 0167-577X

PUBLISHER: Elsevier Science B.V.

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Thin film devices of charge transfer adducts of tetrathiafulvalene (TTF) were fabricated. A luminance of  $5 \text{ cd m}^{-2}$  was achieved for a device structure ITO/poly(aniline)/TTF(No3)0.55/Al whose EL spectrum has a broad peak at 645 nm. The devices were fabricated by spin coating from solns. of the adducts. A luminous efficiency of  $5 + 10^{-4} \text{ lm W}^{-1}$  was obtained for these devices which is comparable to that of ITO/poly(aniline)/Alq3/Al ( $5.2 + 10^{-4} \text{ lm W}^{-1}$ ) under same fabrication conditions. The single layer, mixed layer and double layer devices fabricated in this study fit the space charge limited model. Devices fabricated from [TTF-Alq3] emit white light ( $40 \text{ cd m}^{-2}$ ) with a luminous efficiency of  $6.6 + 10^{-4} \text{ lm W}^{-1}$ . The color of light emitted appears to depend on the effective oxidation state of TTF in the adducts.

REFERENCE COUNT: 29 THERE ARE 29 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 6 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1999:270540 CAPLUS Full-text

DOCUMENT NUMBER: 131:5033

TITLE: Regio- and stereoselective fluorinative ring-opening reaction of epoxylcohols by (i-PrO)2TiF2-Et4NF-nHF. Synthesis of optically active 3-fluoro-1,2-diols

AUTHOR(S): Hara, Shoji; Hoshio, Takuro; Kameoka, Mikio; Sawaguchi, Masataka; Fukuhara, Tsuyoshi; Yoneda, Norihiko

CORPORATE SOURCE: Division of Molecular Chemistry, Graduate School of Engineering, Hokkaido University, Sapporo, 060-8628, Japan

SOURCE: Tetrahedron (1999), 55(16), 4947-4954

CODEN: TETRAB; ISSN: 0040-4020

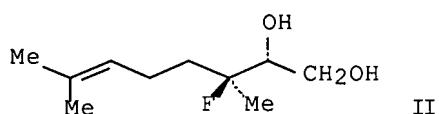
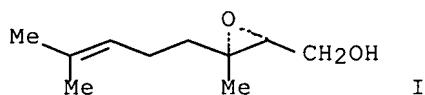
PUBLISHER: Elsevier Science Ltd.

DOCUMENT TYPE: Journal

LANGUAGE: English

OTHER SOURCE(S): CASREACT 131:5033

GI



AB Stereo- and regioselective ring opening reaction of epoxyalcs. such as epoxygeraniol I (racemic and R,R) was achieved by (i-PrO)2TiF2 and Et4NF-nHF (n = 3,4) under mild conditions. E.g., (2R,3R)-I was treated with Et4N·3HF in chloroform for 11h to give II in 73% yield and 95% ee. Fluoride opens the epoxy alc. at the carbon  $\beta$  to the alc. with inversion of stereochem. to give 3-fluoro-1,2-diols regio- and stereoselectively. When optically active epoxyalcs. were used as starting materials, the corresponding 3-fluoro -1,2-diols were obtained with high optical purity.

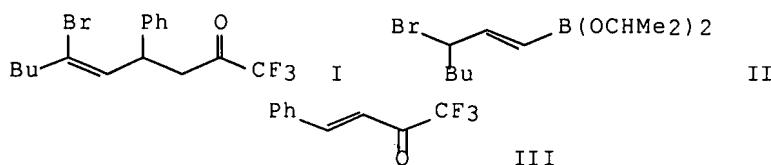
REFERENCE COUNT: 23 THERE ARE 23 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L45 ANSWER 7 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1994:298174 CAPLUS Full-text  
 DOCUMENT NUMBER: 120:298174

TITLE: A stereoselective synthesis of  $\gamma,\delta$ -unsaturated ketones possessing perfluoroalkyl groups by trifluoroborane etherate-mediated 1,4-addition reaction of alkenyldiisopropoxyboranes to  $\alpha,\beta$ -unsaturated ketones

AUTHOR(S): Takada, Eiichi; Hara, Shoji; Suzuki, Akira  
 CORPORATE SOURCE: Fac. Eng., Hokkaido Univ., Sapporo, 060, Japan  
 SOURCE: Tetrahedron Letters (1993), 34(44), 7067-70  
 CODEN: TELEAY; ISSN: 0040-4039

DOCUMENT TYPE: Journal  
 LANGUAGE: English  
 OTHER SOURCE(S): CASREACT 120:298174  
 GI



AB A variety of  $\gamma, \delta$ -unsatd. ketones, e.g., I, having perfluoroalkyl groups were prepared stereoselectively by the trifluoroborane etherate mediated 1,4-addition reaction of alkenylidisisopropoxyboranes, e.g., II, to  $\alpha, \beta$ -unsatd. ketones substituted by a perfluoroalkyl group, e.g., III. The undesired 1,2-addition of alkenyl groups or elimination of metal fluoride from the adducts could be avoided completely and the products were obtained in good yields.

L45 ANSWER 8 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1993:428553 CAPLUS Full-text

DOCUMENT NUMBER: 119:28553

TITLE: Chiral recognition based on hydrophobic entanglement of enantiomers with chiral diamide phases in aqueous media

AUTHOR(S): Dobashi, Akira; Dobashi, Yasuo; Ono, Tamami; Ishida, Ken'ya; Oshida, Norio; Hara, Shoji

CORPORATE SOURCE: Tokyo Coll. Pharm., Tokyo, 192-03, Japan

SOURCE: Journal of Liquid Chromatography (1993), 16(4), 825-41

CODEN: JLCHD8; ISSN: 0148-3919

DOCUMENT TYPE: Journal

LANGUAGE: English

AB Chiral stationary phases from N-(10-undecenoyl)-L-valine tert-butylamide and N-(5-hexenoyl)-L-valine tert-butylamide afford a hydrophobic interfacial phase by which hydrogen bond association could be induced for the resolution of enantiomeric N-acylated amino acid esters in aqueous phase liquid chromatog. This was shown using the fluorescence fine structure of pyrene sorbed on the interfacial phase in three kinds of wetting water-organic solvent mixts.: water-methanol, water-acetonitrile, and water-THF. The intensity ratios of pyrene vibronic emission peaks gave strong indication of changes in microenvironment polarity around pyrene as a function of overlaying solvent composition. Increase in organic solvent concentration enhanced polarity due to solvent intercalation in the interfacial phase. A less polar organic solvent, such as THF, was distributed to a greater degree within the phase than the more polar methanol and consequently, thus giving rise to greater polarity. Enantioselective association between the chiral moiety and enantiomers was hindered by increased intercalation of the less polar organic solvent, thus lessening the degree of chiral recognition.

L45 ANSWER 9 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN

ACCESSION NUMBER: 1991:404413 CAPLUS Full-text

DOCUMENT NUMBER: 115:4413

TITLE: Ligand-exchange radiochromatographic resolution of [tritium-labeled]DL-valine, [tritium-labeled]DL-leucine and [tritium-labeled]DL-methionine using a reverse-phase column in the presence of cupric acetate and GMP or cyanocobalamin

AUTHOR(S): Fukuhara, T.; Isoyama, M.; Tanaka, M.;

Yuasa, S.

CORPORATE SOURCE: Coll. Gen. Educ., Osaka Univ., Toyonaka, 560, Japan  
 SOURCE: Applied Radiation and Isotopes (1991), 42(5), 457-62  
 CODEN: ARISEF; ISSN: 0883-2889

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB DL-[3H]valine, DL-[3H]leucine, and DL-[3H]methionine were resolved using ligand-exchange chromatog. (reversed-phase) in the presence of cupric acetate [Cu(II)], and 5'-GMP or cyanocobalamin. The assignment of the resolved enantiomers was carried out by means of cochromatog. with nonlabeled DL-amino acids after modifying them with fluorodinitrobenzene. The optical purity of the enantiomers was estimated to be >99%. The resolved enantiomers were subjected to bioassay, which showed that the enantiomers were biochem. active.

L45 ANSWER 10 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1990:158854 CAPLUS Full-text  
 DOCUMENT NUMBER: 112:158854  
 TITLE: Radiochromatographic resolution of [14C]DL-tryptophan, [14C]DL-phenylalanine and [35S]DL-methionine on a cellulose column

AUTHOR(S): Isoyama, M.; Fukuhara, T.; Tanaka, M.; Shimada, A.; Yuasa, S.

CORPORATE SOURCE: Coll. Gen. Educ., Osaka Univ., Osaka, 560, Japan  
 SOURCE: Applied Radiation and Isotopes (1989), 40(4), 285-9  
 CODEN: ARISEF; ISSN: 0883-2889

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB [14C]DL-tryptophan, [14C]DL-phenylalanine, and [35S]DL-methionine were resolved using cellulose column chromatog. The assignment for the resolved enantiomers was carried out by means of co-chromatog. with non-labeled DL-amino acids after modification with fluorodinitrobenzene. The optical purity of the enantiomers was greater than 99%. The resolved enantiomers were provided for bioassay, showing that the enantiomer was biochem. active.

L45 ANSWER 11 OF 11 CAPLUS COPYRIGHT 2007 ACS on STN  
 ACCESSION NUMBER: 1986:144849 CAPLUS Full-text  
 DOCUMENT NUMBER: 104:144849  
 TITLE: Resolution of aliphatic 2,4-dinitrophenyl-DL-amino acids on a native cellulose column

AUTHOR(S): Fukuhara, T.; Itoh, M.; Isoyama, M.; Shimada, A.; Yuasa, S.

CORPORATE SOURCE: Coll. Gen. Educ., Osaka Univ., Osaka, 560, Japan  
 SOURCE: Journal of Chromatography (1986), 354, 325-9  
 CODEN: JOCRAM; ISSN: 0021-9673

DOCUMENT TYPE: Journal  
 LANGUAGE: English

AB Aliphatic DL-amino acids derivatized with fluorodinitrobenzene (2,4-dinitrophenyl-DL-amino acids) were resolved on a native cellulose (B-27) column. High resolution factors and resolution rates were obtained. It is suggested than an increase in the mol. size and an amplification of distortion resulting from the modification of the amino group may play an important role on their complete resolution

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(FILE 'HOME' ENTERED AT 13:25:14 ON 08 AUG 2007)

FILE 'REGISTRY' ENTERED AT 13:25:22 ON 08 AUG 2007

L1 STR  
 L2 1 SEA SSS SAM L1  
     D SCA  
 L\*\*\* DEL3300887 S F/ELS AND C>1 AND O/ELS NOT (IDS/CI OR MAN/CI OR PMS/CI)  
 L\*\*\* DEL 0 S L1 SAM SUB=L3  
 L\*\*\* DEL3260864 S F/ELS AND C>3 AND O/ELS AND NC<3 NOT (IDS/CI OR MAN/CI OR PMS  
 L\*\*\* DEL 0 S L1 SAM SUB=L3  
 L3 SCR 89  
 L4 17 SEA SSS SAM L3 AND L1  
 L5 3212 SEA SSS FUL L3 AND L1

FILE 'CAPLUS' ENTERED AT 13:35:46 ON 08 AUG 2007

L6 964 SEA ABB=ON PLU=ON L5(L)PREP+NT/RL

FILE 'REGISTRY' ENTERED AT 14:45:23 ON 08 AUG 2007

D QUE L1  
 L\*\*\* DEL STR L1  
 L7 STR L1  
 L8 3 SEA SSS SAM L7  
 L9 517 SEA SSS FUL L7

FILE 'CAPLUS' ENTERED AT 14:47:35 ON 08 AUG 2007

L10 128 SEA ABB=ON PLU=ON L9(L)PREP+NT/RL  
 L11 78 SEA ABB=ON PLU=ON L9(L)RACT+NT/RL  
 L12 56 SEA ABB=ON PLU=ON L11 AND L6  
 L13 1046 SEA ABB=ON PLU=ON L9 OR L6

FILE 'REGISTRY' ENTERED AT 14:48:26 ON 08 AUG 2007

FILE 'CAPLUS' ENTERED AT 14:48:31 ON 08 AUG 2007  
 L14 TRA PLU=ON L13 1- RN : 36206 TERMS

FILE 'REGISTRY' ENTERED AT 14:49:06 ON 08 AUG 2007

L15 36201 SEA ABB=ON PLU=ON L14  
     D COST  
 L16 STR L1  
 L17 22 SEA SSS SAM L16  
     DIS  
 L18 50 SEA SUB=L15 SSS SAM L16  
 L19 1006 SEA SUB=L15 SSS FUL L16  
 L20 STR L16  
 L21 980 SEA SUB=L19 SSS FUL L20  
 L22 26 SEA ABB=ON PLU=ON L19 NOT L21  
 L23 STR L16  
 L24 26 SEA SUB=L19 SSS FUL L23

FILE 'CAPLUS' ENTERED AT 15:04:23 ON 08 AUG 2007

L25 24662 SEA ABB=ON PLU=ON L21(L)RACT+NT/RL  
 L26 21 SEA ABB=ON PLU=ON L24(L)RACT+NT/RL  
 L27 5 SEA ABB=ON PLU=ON L25 AND L26  
 L28 3 SEA ABB=ON PLU=ON L27 AND L10  
 L29 2 SEA ABB=ON PLU=ON L27 AND L6  
 L30 3 SEA ABB=ON PLU=ON L28 OR L29  
     D COST

FILE 'CASREACT' ENTERED AT 15:05:59 ON 08 AUG 2007

L31 STR L16

L32 1 SEA SSS SAM L31 ( 1 REACTIONS)  
 D SCA  
 L33 STR L31  
 L34 0 SEA SSS SAM L33 ( 0 REACTIONS)  
 L35 2 SEA SSS FUL L33 ( 9 REACTIONS)  
 L36 2 SEA ABB=ON PLU=ON L35/COM

FILE 'CAPLUS' ENTERED AT 15:10:29 ON 08 AUG 2007

L37 1 SEA ABB=ON PLU=ON L30 NOT L36  
 E HARA S/AU  
 L38 694 SEA ABB=ON PLU=ON ("HARA S"/AU OR "HARA S K"/AU OR "HARA S M"/AU OR "HARA SHOJI"/AU)  
 E FUKUHARA T/AU  
 L39 176 SEA ABB=ON PLU=ON ("FUKUHARA T"/AU OR "FUKUHARA T K"/AU OR "FUKUHARA T KAY"/AU OR "FUKUHARA TSUYOSHI"/AU OR "FUKUHARA TSUYOSKI"/AU)  
 L40 46 SEA ABB=ON PLU=ON L38 AND L39  
 L41 87 SEA ABB=ON PLU=ON (L38 OR L39) AND (OPTIC? OR ENANT? OR CHIRAL?)  
 L42 11 SEA ABB=ON PLU=ON L41 AND FLUOR?  
 L43 41 SEA ABB=ON PLU=ON L40 AND FLUOR?  
 L44 3 SEA ABB=ON PLU=ON (L38 OR L39) AND (L5 OR L9)  
 L45 11 SEA ABB=ON PLU=ON L42 OR L44

FILE 'CASREACT' ENTERED AT 15:16:09 ON 08 AUG 2007

D QUE L36  
 D L36 IBIB ABS CRD TOT

FILE 'CAPLUS' ENTERED AT 15:16:37 ON 08 AUG 2007

D QUE L37  
 D L37 IBIB ABS HITSTR  
 D QUE L45  
 D L45 IBIB ABS TOT